



REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and in view of the reasons that follow. Claims 1-5, 14, and 20 have been amended. Claims 10-13 have been withdrawn. Claims 1-9 and 14-20 are now pending in this application.

I. Restriction Requirement

In Section 2 of the Office Action, the Examiner states that the election between Group I (claims 1-9 and 14-20) and Group II (claims 10-13) is still deemed proper and is made final. Applicants elected to pursue the claims of Group I (claims 1-9 and 14-20) in the Response to the Restriction Requirement dated November 22, 2005. Claims 10-13 will be canceled when claims 1-9 and 14-20 are deemed allowable.

II. Sequence Listing

In Section 3 of the Office Action, the Examiner states that the application contains sequence disclosures encompassed by 37 C.F.R. §§ 1.821(a)(1) and (a)(2) and fails to comply with the requirements of 37 C.F.R. §§ 1.821-1.825. In compliance with the requirements of 37 C.F.R. §§ 1.821-1.825, enclosed herewith are an initial paper copy of the Sequence Listing, an initial computer readable format (CRF) copy of the Sequence Listing, an amendment directing entry of the Sequence Listing into the application, and a Statement to Support Filing and Submission of the Sequence Listing. The amendments to the specification insert the sequence listing into the specification of the patent application. These amendments do not add new matter into the application and are otherwise proper. Accordingly, Applicants respectfully request entry of this amendment in its entirety.

III. Rejection of Claims 1-9 and 19-20 under 35 U.S.C. § 112

In Section 5 of the Office Action, claims 1-9 and 19-20 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Specifically, claims 1-9 were rejected as indefinite based on recitation of the phrases "high frequency" and "low frequency." The phrases "high

frequency” and “low frequency” are used in claims 1-4. Claims 1-4 have been amended to remove usage of the phrases “high frequency” and “low frequency.” Additionally, claims 5 and 19 were rejected as indefinite based on recitation of the phrase “high pass.” The phrase “high pass” is used in claims 5 and 20. Claims 5 and 20 have been amended to remove usage of the phrase “high pass.” The remaining claims 6-9 and 19 do not use any of the phrases cited by the Examiner as indefinite. As a result, Applicants respectfully request withdrawal of the rejection.

IV. Rejection of Claim 14 Under 35 U.S.C. § 102(b)

In Section 8 of the Office Action, claim 14 was rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,713,347 (Mitchell et al.). Applicants respectfully traverse this rejection.

Claim 14, as amended, recites:

a mixer adapted to receive a first signal reflected from the first signal generator, to receive a second signal from the first signal generator, and to mix the received first signal and the received second signal;

In Section 8 of the Office Action, with emphasis added through underlining, the Examiner states:

those limitations present in (d) but not recited in Mitchell et al. i.e. “receiving a signal mix...,” it must be noted that the intended use of a claimed product does not necessarily further limit said product.

Applicants have amended claim 14 to include a mixer. As the Examiner recognizes, Mitchell et al. fails to disclose, suggest, or teach formation of a signal mix or any element for mixing signals. As a result, Mitchell et al. fails to disclose, suggest, or teach at least the limitation of “a mixer adapted to receive a first signal reflected from the first signal generator, to receive a second signal from the first signal generator, and to mix the received first signal and the received second signal” as required by claim 14. An anticipation rejection cannot properly be maintained where

the reference used in the rejection does not disclose all of the recited claim elements. Therefore, Applicants respectfully request withdrawal of the rejection of claim 14.

V. Rejection of Claims 16-18 Under 35 U.S.C. § 103(a)

In Section 11 of the Office Action, claims 16-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mitchell et al. in view of U.S. Patent No. 6,090,933 (Kayyem et al.) and/or U.S. Patent No. 6,756,223 (Roberts). Applicants respectfully traverse this rejection because the Examiner has failed to present a prima facie case of obviousness. MPEP § 2143 states:

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

At a minimum, the Examiner has failed to demonstrate that Mitchell et al., Kayyem et al., and Roberts, alone or in combination, disclose, teach, or suggest all of the claim limitations as recited in Claims 16-18.

As discussed in Section IV. above, Mitchell et al. fails to teach at least the limitation of “a mixer adapted to receive a first signal reflected from the first signal generator, to receive a second signal from the first signal generator, and to mix the received first signal and the received second signal” as required by claim 14. Neither Kayyem et al. nor Roberts disclose, suggest, or teach formation of a signal mix or any element for mixing signals. As a result, neither Kayyem et al. nor Roberts disclose, suggest, or teach all of the limitations of claim 14. An obviousness rejection cannot be properly maintained where the references used in the rejection do not disclose all of the recited claim elements. Therefore, Applicants respectfully request withdrawal of the rejection of claims 16-18, which depend from claim 14.

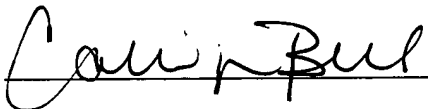
Applicants believe that the present application is in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 50-2350. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 50-2350. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicant hereby petitions for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 50-2350.

Respectfully submitted,

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